## ABSTRACT

The novel binuclear, oxygen-bridged, bimetallic complexes of the general formula (I):

(I) $[(LM^1R^1)\ (Cp_2M^2R^2)]\ (\mu\text{-}O)$

are suitable as polymerization catalysts for olefin polymerization. ($M^1$ = Al, Ge, Zr, or Ti; $M^2$ = Zr, Ti, or Hf; Cp = cyclopentadienyl; $R^1$, $R^2$ = H, methyl, ethyl, i-propyl, t-butyl, halogen, phenyl, alkylphenyl, $SiMe_3$; L = a bidentate, doubly heteroatom-coordinated organic chemical ligand, which together with the metal $M^1$ forms a 5 or 6-membered ring.) They display very good catalytic activities, good operating lives, and require little cocatalyst.

(Figure 3)